



6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[[EPA-R09-OAR-2011-0130](#), FRL-9658-5]

Approval and Promulgation of Air Quality Implementation Plans; State of Nevada; Regional Haze State and Federal Implementation Plans; BART Determination for Reid Gardner Generating Station

AGENCY: Environmental Protection Agency (EPA)

ACTION: Proposed rule.

SUMMARY: EPA is proposing to partially approve and partially disapprove the remaining portion of a revision to the Nevada State Implementation Plan (SIP) to implement the regional haze program for the first planning period through July 31, 2018.

This Notice proposes to approve the chapter of Nevada's Regional Haze SIP that requires Best Available Retrofit Technology (BART) for emissions limits of oxides of nitrogen (NOx) from Units 1 and 2 at the Reid Gardner Generating Station (RGGS). We are proposing to disapprove the NOx emissions limit for Unit 3. We are also proposing to disapprove the provision of the RGGS BART determination that sets a 12-month rolling average for Units 1 through 3. This Notice proposes to promulgate a Federal Implementation Plan (FIP) that establishes certain requirements for which the State, in a letter dated March 22, 2012, has agreed to submit a SIP revision. The FIP sets an emissions

limit of 0.20 lbs/MMBtu (pounds per million British thermal units) for Unit 3 as BART and requires the determination of emissions from Units 1 through 3 based on a 30-day rolling average (averaged across all three units). In a prior action, EPA approved Nevada's Regional Haze SIP except for its BART determination for NOx for RGGS Units 1 through 3.

DATES: *Comments:* Written comments must be received at the address below on or before [insert date 30 days from the date of publication in the Federal Register]

Public Hearing: We will hold a public hearing in early May at a location near the Facility. We will post information on the specifics on our website at <http://www.epa.gov/region9/air/actions/nv.html#haze> and by publishing a notice in a general circulation newspaper at least 15 days before the date of the hearing.

ADDRESSES: Submit your comments, identified by Docket ID No.

EPA-R09-OAR-2011-0130 by one of the following methods:

1. Federal Rulemaking portal: <http://www.regulations.gov>. Follow the on-line instructions for submitting comments.
2. E-mail: Webb.Thomas@epa.gov
3. Fax: 415-947-3579 (Attention: Thomas Webb)

4. Mail: Thomas Webb, EPA Region 9, Planning Office, Air Division, 75 Hawthorne Street, San Francisco, California 94105.

5. Hand Delivery or Courier: Such deliveries are only accepted Monday through Friday, 8:30 AM - 4:30 PM, excluding federal holidays. Special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. EPA-R09-OAR-2011-0130. Our policy is that EPA will include all comments received in the public docket without change. EPA may make comments available online at <http://www.regulations.gov>, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through <http://www.regulations.gov> or e-mail. The <http://www.regulations.gov> web site is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA, without going through <http://www.regulations.gov>, EPA will include your e-mail address as part of the comment that is placed in the public docket and made available on the internet. If you submit an electronic comment, EPA recommends that you include your name

and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment.

Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about EPA's public docket visit the EPA Docket Center homepage at

<http://www.epa.gov/epahome/dockets.htm>.

Docket: All documents in the docket are listed in the <http://www.regulations.gov> index. Although it is listed in the index, some information is not publicly available (e.g., CBI or other information whose disclosure is restricted by statute). Certain other material, such as copyrighted material, voluminous records or large maps, will be publicly available only in hard copy form. Publicly available docket materials are available either electronically at <http://www.regulations.gov> or in hard copy at the Planning Office of the Air Division, Air-2, EPA Region 9, 75 Hawthorne Street, San Francisco, CA 94105. EPA requests you contact the individual listed in the FOR FURTHER INFORMATION CONTACT section to view the hard copy material of the docket. You may view the hard copy material of the docket Monday through Friday, 9:00 - 5:30 PST, excluding federal holidays.

FOR FURTHER INFORMATION CONTACT: Thomas Webb, U.S. EPA, Region 9, Planning Office, Air Division, Air-2, 75 Hawthorne Street, San Francisco, CA 94105. Thomas Webb can be reached at telephone number (415) 947-4139 and via electronic mail at webb.thomas@epa.gov.

Definitions

For the purpose of this document, we are giving meaning to certain words or initials as follows:

- (1) The initials BART mean or refer to Best Available Retrofit Technology
- (2) The initials CAA mean or refer to Clean Air Act
- (3) The initials CCM mean or refer to EPA's Control Cost Manual
- (4) The words or initials EPA, we, us or our mean or refer to the United States Environmental Protection Agency
- (5) The initials GCNP mean or refer to Grand Canyon National Park
- (6) The initials IMPROVE mean or refer to Interagency Monitoring of Protected Visual Environments
- (7) The word Jarbidge means or refers to the Jarbidge Wilderness Area
- (8) The initials LNB mean or refer to low NOx burners

- (9) The initials LTS mean or refer to Long-Term Strategy
- (10) The initials NDEP mean or refer to Nevada Division of Environmental Protection
- (11) The words Nevada and State mean or refer to the State of Nevada
- (12) The initials NOx mean or refer to nitrogen oxides
- (13) The initials OFA mean or refer to overfire air
- (14) The initials RGGS means or refers to Reid Gardner Generating Station Units 1 through 3
- (15) The initials RHR mean or refer to Regional Haze Rule
- (16) The initials ROFA mean or refer to rotating overfire air
- (17) The word Rotamix means or refers to a technology that combines a conventional SNCR system with a proprietary air and reagent injection system
- (18) The initials RPG mean or refer to Reasonable Progress Goal
- (19) The initials SCR mean or refer to selective catalytic reduction
- (20) The initials SIP mean or refer to State Implementation Plan
- (21) The initials FIP mean or refer to Federal Implementation Plan
- (22) The initials SNCR mean or refer to selective non-catalytic reduction

(23) The initials TSD mean or refer to Technical Support Document

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I. Background

The CAA requires each state to develop plans, referred to as SIPs, to meet various air quality requirements. A state must submit its SIPs and SIP revisions to us for approval. Once approved, a SIP is enforceable by EPA and citizens under the CAA, and is, therefore, federally enforceable. If a state fails to make a required SIP submittal or if we find that a state's required submittal is incomplete or unapprovable, then we must promulgate a FIP to fill this regulatory gap. CAA section 110(c)(1). 40 U.S.C. 7410(c).

This proposed action is intended to fulfill the requirement that states adopt and EPA approve SIPs that address regional haze. In 1990, Congress added section 169B to the CAA to address regional haze issues, and we promulgated regulations addressing regional haze in 1999. 64 FR 35714 (July 1, 1999), codified at 40 CFR part 51, subpart P. For a more detailed

discussion please see our prior proposed action at 76 FR 36450 (June 22, 2011).

II. State Submittals and EPA's Prior Action

The Nevada Division of Environmental Protection (NDEP) adopted and transmitted its "Nevada Regional Haze State Implementation Plan" (Nevada RH SIP) to EPA Region 9 with a letter dated November 18, 2009. The Nevada RH SIP was complete by operation of law on May 18, 2010. Nevada provided public notice and held a public hearing on the proposed Best Available Retrofit Technology (BART) controls for four stationary sources, including RGGS, on April 23, 2009. The State submitted to EPA additional documentation of public process and adoption of a more stringent emission limit for one of the BART sources on February 18, 2010. Revised Nevada Division of Environmental Protection BART Determination Review of NV Energy's Reid Gardner Generation Station Units 1, 2 and 3, Revised October 22, 2009 (hereinafter "RGGS BART Determination"). Nevada included in its SIP submittal NDEP's responses to written comments from EPA Region 9, the National Park Service, and a consortium of conservation organizations. NDEP responded to comments on its RGGS BART Determination for NOx in two sections of its documents.¹

¹ See Appendix C (starting at C-8) and D (starting at D-141) of the NV Regional Haze SIP, available as attachments to EPA-R09-OAR-2011-0130-0003.

On June 22, 2011, EPA proposed to approve the entire Nevada Regional Haze SIP submittal, including the RGGGS BART Determination. 76 FR 36450 (June 22, 2011). EPA received adverse comments on the proposed approval, including specific comments on NDEP's modeling and cost analysis of the RGGGS BART Determination for NOx. See Modeling for the Reid Gardner Generating Station: Visibility Impacts in Class I Areas, Prepared by H. Andrew Gray, Ph.D., August 2011 and Review of EPA's Proposed Approval of a Revision to the State of Nevada's State Implementation Plan to Implement the Regional Haze Program, Comments on Determination of Best Available Retrofit Technology, August 22, 2011, prepared by Petra Pless, D. Env. and Bill Powers, P.E.² ("Pless Powers Report").

On December 13, 2011, EPA signed its final approval of the Nevada RH SIP submittal that was published in the Federal Register on March 26, 2012. 77 FR 17334 (March 26, 2012). In our final approval, we delayed taking any action on the Nevada's RGGGS BART Determination for NOx.³ EPA indicated that we needed additional time to consider the substantial comments submitted on the RGGGS BART Determination for NOx.

On December 22, 2011, we sent a letter via email to NDEP requesting clarification on several issues related to the

² Both reports can be found as attachments to EPA-R09-OAR-2011-0130-0062, with supporting information located in -0063.

³ 77 FR 17334

comments on the RGGS BART Determination for NOx.⁴ NDEP responded on February 6 and February 14, 2012 by providing us with cost-related information. These cost estimates consisted of updates to specific line items in order to reflect September 2011 material costs, but did not include any supporting information such as detailed equipment lists, vendor quotes, or the design basis for line item costs.

EPA requested further information from NDEP on March 14, 2012 regarding the emissions limit that NDEP had proposed as BART for Unit 3.⁵ Comments submitted on our June 22, 2011, proposed approval indicated that the actual average emission rate that RGGS reported for Unit 3 was significantly lower than NDEP's BART emissions limit for NOx of 0.28 lb/MMBtu. Pless Powers at 48. EPA also requested information regarding NDEP's basis for allowing a 12-month rolling average for NOx for Units 1 - 3, which was also raised as an issue in the comments. Pless Powers at 52.

In response, NDEP informed EPA on March 22, 2012 that it had conducted further analysis resulting in NDEP's conclusion to lower the BART emissions limit for Unit 3 BART for NOx to 0.20 lb/MMBtu.⁶ NDEP also informed EPA that its further analysis

⁴ Email dated December 22, 2011, from Colleen McKaughan (EPA) to Mike Elges (NDEP) and others.

⁵ Email dated March 14, 2012, from Colleen McKaughan (EPA) to Mike Elges (NDEP).

⁶ Letter dated March 22, 2012 from Mike Elges (NDEP) to Deborah Jordan (EPA).

supported determining the NOx BART limit for all RGGS Units based on a 30-day rolling average rather than the 12-month rolling average contained in the adopted rules and submitted SIP, provided that compliance is determined based on a three-unit average. Finally, NDEP indicated that it had evaluated requiring Selective Non-Catalytic Reduction (SNCR) with LNB and OFA rather than ROFA with Rotamix as BART. NDEP stated that Nevada Energy had installed ROFA on Unit 4 but that it has not operated as expected. NDEP anticipated SNCR with LNB and OFA would produce more reliable performance.

The Nevada RH SIP included an evaluation of SNCR finding that it would result in a higher emissions limit for each unit than ROFA with Rotamix.⁷ NDEP's recent re-evaluation has concluded that SNCR with LNB and OFA would result in a NOx BART emissions limit of 0.20 lb/MMBtu for Units 1 through 3. NDEP indicates that it will submit a SIP revision by September 2012 that evaluates the substitution of SNCR with LNB and OFA for ROFA with Rotamix, lowers the NOx BART limit for RGGS Unit 3, and requires a NOx emissions limit of 0.20 lb/MMBtu on a 30-day rolling average (averaged across all three units).⁸

III. Overview of Proposed Action

⁷ As indicated by controlled emission rates summarized in Table 1, NDEP Reid Gardner BART Determination, October 22, 2009. Available as Docket Item No. EPA-R09-OAR-2011-0130-0005.

⁸ Letter dated March 22, 2012, from Mike Elges (NDEP) to Deborah Jordan (EPA).

Today's proposal addresses the RGGGS BART Determination for NOx, and if finalized, will complete our action on the Nevada Regional Haze SIP submitted on November 18, 2009. In its BART determination of RGGGS, NDEP considered several control technologies, including Selective Catalytic Reduction (SCR), SNCR and ROFA with Rotamix. NDEP concluded that SCR would result in a very small incremental improvement of visibility over other technologies, which did not justify the incremental cost of installing and operating SCR. The results of our own analysis of the incremental visibility improvement and cost for SCR differ from NDEP's analysis in certain respects, but support NDEP's decision to establish a NOx BART emission limit that could be achieved with ROFA and Rotamix (or SNCR) rather than requiring an emission limit consistent with SCR technology. This proposal and our TSD provide additional information concerning our approval of NDEP's determination that SCR is not required as BART for RGGGS. We considered the comments that we received on our June 22, 2011, proposed approval. We also conducted an independent modeling analysis to evaluate the incremental visibility improvement attributable to the NOx emission rates indicated in the RH SIP. Our analysis examined the visibility improvement that would be expected by requiring RGGGS to meet a NOx emission limit of 0.06 lbs/MMbtu based on installation and operation of SCR. Our proposed approval is based in large part

on this modeling analysis, discussed in detail below and in the TSD, showing that SCR controls at RGGS would not result in enough incremental visibility improvement at a single Class I area to justify the incremental cost of the technology.⁹

Therefore, we are proposing to approve NDEP's determination that NOx BART for Units 1 and 2 is a limit of 0.20 lbs/MMBtu, which can be achieved with ROFA with Rotamix, or with SNCR with LNB and OFA. We are proposing to disapprove NDEP's NOx BART determination for RGGS Unit 3 and the SIP's provision to measure NOx emissions from Units 1 through 3 on a 12-month rolling average. Because we are proposing to disapprove these provisions of the SIP, we are concurrently proposing a FIP. Our FIP proposes promulgating a NOx BART emissions limit for RGGS Unit 3 of 0.20 lbs/MMBtu. We are also proposing a FIP provision requiring that NOx emissions for RGGS Units 1 through 3 are measured on a rolling 30-day average (across all three units). Our justification for our proposed disapproval and proposed FIP provisions is discussed in detail in our Technical Support Document (TSD) in the docket for this Notice.

IV. Requirements for Regional Haze SIPs

A. *Regional Haze Rule*

⁹ In NDEP/Nevada Energy's analysis, and in our analysis, the highest impacted Class I area is Grand Canyon National Park.

Regional haze SIPs must establish a long-term strategy that ensures reasonable progress toward achieving natural visibility conditions in each Class I area affected by the state's emissions. For a further discussion of this topic, please see our Notice of Proposed Rulemaking. 76 FR 36450 (June 22, 2011).

B. Best Available Retrofit Technology

Section 169A of the CAA directs states to evaluate the use of retrofit controls at certain larger, often uncontrolled, older stationary sources in order to address visibility impacts from these sources. Specifically, section 169A(b)(2)(A) of the CAA requires states to revise their SIPs to contain such measures as may be necessary to make reasonable progress towards the natural visibility goal, including a requirement that certain categories of existing major stationary sources¹⁰ built between 1962 and 1977 procure, install, and operate the "Best Available Retrofit Technology" as determined by the state. Under the RHR, states are directed to conduct BART determinations for such "BART-eligible" sources that may be anticipated to cause or contribute to any visibility impairment in a Class I area.

C. Roles of Agencies in Addressing Regional Haze

¹⁰ The set of "major stationary sources" potentially subject to BART is listed in CAA section 169A(g)(7).

Successful implementation of the regional haze program will require long-term coordination among states, tribal governments and various federal agencies. EPA published on July 6, 2005, the *Guidelines for BART Determinations under the Regional Haze Rule* at Appendix Y to 40 CFR Part 51 (hereinafter referred to as the "BART Guidelines") to assist states in determining which of their sources should be subject to the BART requirements and in determining appropriate emission limits for each applicable source. In making a BART determination for a fossil fuel-fired electric generating plant with a total generating capacity in excess of 750 megawatts, a state must use the approach set forth in the BART Guidelines. In contrast, however, our BART Guidelines encourage, but do not require, States to follow the BART Guidelines in making BART determinations for other types of sources, including fossil fuel-fired electric generating plants with a total generating capacity that is less than 750 megawatts. 70 FR 39104, 39108 (July 6, 2005) ("The better reading of the Act indicates that Congress intended the guidelines to be mandatory only with respect to 750 megawatt power plants.") The CAA, therefore, allows States to exercise broader discretion in applying the BART guidelines to power plants that are smaller than 750 megawatts, such as RGGS. *Id.*

In their SIPs, states must document their BART control determination analyses. In making BART determinations, section

169A(g)(2) of the CAA requires that states consider the following factors: (1) the costs of compliance; (2) the energy and non-air quality environmental impacts of compliance; (3) any existing pollution control technology in use at the source; (4) the remaining useful life of the source; and, (5) the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology. States are free to determine the weight and significance assigned to each factor, and as discussed above, generally have greater latitude in this determination for power plants that are smaller than 750 megawatts.

A regional haze SIP must include source-specific BART emission limits and compliance schedules for each source subject to BART. Once a state has made its BART determination, the BART controls must be installed and in operation as expeditiously as practicable, but no later than five years after the date EPA approves the regional haze SIP. CAA section 169(g)(4). 40 CFR 51.308(e)(1)(iv). In addition to what is required by the RHR, general SIP requirements mandate that the SIP must also include all regulatory requirements related to monitoring, recordkeeping and reporting for the BART controls on the source.

D. Lawsuits

In two separate lawsuits, environmental groups sued EPA for our failure to take timely action with respect to the regional

haze requirements of the CAA and our regulations. In particular, the lawsuits alleged that we had failed to promulgate FIPs for these requirements within the two-year period allowed by CAA section 110(c) or, in the alternative, fully approve SIPs addressing these requirements. EPA entered into a Consent Decree agreeing to sign a Federal Register Notice taking action on the Nevada RH SIP by December 13, 2011. The litigants agreed to extend our time for taking action on the RGGS NOx BART determination portion of the Nevada SIP given the extensive comments we received on our June 22, 2011, proposed approval. Our proposed action today meets our agreement with the litigants.

V. EPA's Analysis of Nevada's RH SIP

A. Affected Class I Areas

There are four Class I areas within a 300 kilometer (km) radius of RGGS: Grand Canyon National Park, Bryce Canyon National Park, Zion National Park and Sycamore Canyon Wilderness. Joshua Tree National Monument is just on the border of the 300 km radius of RGGS. Of these, GCNP is the nearest area to RGGS, located at a distance of 85 km.

B. Identification of Sources Subject to BART

EPA's final approval of the Nevada RH SIP agreed with NDEP's determination of its BART-eligible sources within the

state, and its determination of which sources were subject to BART based on their contribution to visibility impairment. EPA's final approval included NDEP's BART determinations for the Tracy, Fort Churchill, and Mohave electrical generating stations.¹¹ In our final approval of the Nevada RH SIP, we took no action on NDEP's NOx BART Determination for RGGGS.

C. Evaluation of Nevada's NOx BART Determination for Reid Gardner Generating Station

Background: Reid Gardner is a coal-fueled, steam-electric generating plant with four operating units producing a total of 557 MW. Three of the units, built in 1965, 1968, and 1976 are BART-eligible, and were determined by NDEP to be subject to BART. Each of these units produces about 100 MW with steam boilers that drive turbine-generators. At present, the units are equipped with LNB and over-fire air (OFA) systems, mechanical collectors for particulate control, wet scrubbers that use soda ash for sulfur dioxide (SO₂) removal, as well as recently installed baghouses. NDEP's review of Nevada Energy's BART report for RGGGS resulted in NDEP agreeing only with the control technologies proposed as BART for SO₂ and PM₁₀.¹²

NOx BART Determination: NDEP performed a five-factor analysis for the BART-eligible units at RGGGS that included

¹¹ 77 FR 17334

¹² EPA approved that portion of NDEP's BART determination for RGGGS on December 13, 2011.

several feasible technologies including SCR, SNCR, and ROFA with Rotamix, among other control technologies. NDEP eliminated SCR-based options and determined that BART controls for NO_x are rotating opposed fire air (ROFA) with Rotamix for Units 1 through 3. For this control technology, NDEP determined emission limits, based on a rolling 12-month average, of 0.20 lb/MMBtu for Units 1 and 2, and 0.28 lb/MMBtu for Unit 3. In its five factor analysis, NDEP eliminated SCR because it gave significant weight to the incremental cost of compliance. NDEP also cited the relatively low visibility improvement at GCNP that would result from SCR over ROFA with Rotamix.

EPA has carefully reviewed NDEP's BART analysis, focusing primarily on the incremental cost of compliance and incremental degree of improvement of visibility between SCR and ROFA with Rotamix. After receiving extensive comments in August 2011, we performed a significant amount of additional analysis for these two factors, including revisions to control cost calculations and new CALPUFF visibility modeling.

1. Costs of compliance

NDEP's analysis: NDEP evaluated the costs of compliance for each feasible NO_x control option by analyzing the average and incremental cost effectiveness of each control technology. Average cost effectiveness (\$/ton) is based on the total annualized cost (\$) of a control option divided by the total

amount of NOx removed (tons) by that control option.

Incremental cost effectiveness is calculated when considering one control technology in relation to another, and examines the differing costs and the differing NOx removal ability of the two control options.

When moving from a less stringent to a more stringent NOx control technology, the more stringent technology will result in greater amounts of NOx removal, but will also typically be more expensive. Incremental cost (\$/ton) is calculated by dividing the difference in annualized costs (\$) of the two technologies by the difference in NOx removal (ton) of the two technologies. Incremental costs are typically calculated "in order", by comparing one control technology with the less stringent technology immediately preceding it. The control cost data that NDEP included in the RH SIP and relied upon in making its NOx BART determination is summarized in Table 1 below.

Table 1. Summary of NDEP NOx BART Determination Results for RGGS Unit 1 through 3 (as included in the RH SIP)

Control Option	Control Efficiency ¹	Emission Rate ¹	Emission Reduction ¹	Annualized Costs ¹	Average Cost Effectiveness ¹	Incremental Cost Effectiveness ¹
	(%)	(lb/MMBtu)	(ton/yr)	(\$MM)	(\$/ton)	(\$/ton)
Reid Gardner Unit 1						
LNB + OFA (enhanced)	21.3%	0.36	483	\$0.55	\$1,143	\$1,143
LNB + OFA + SNCR	40.9%	0.27	927	\$1.13	\$1,222	\$1,308
ROFA + Rotamix	57.7%	0.2	1308	\$1.45	\$1,109	\$833
SCR + LNB + OFA	81.6%	0.085	1850	\$4.75	\$2,566	\$6,085
SCR + ROFA ³	81.6%	0.085	1850	\$5.39	\$2,916	\$7,280
Reid Gardner Unit 2						

LNB + OFA (enhanced)	23.7%	0.355	580	\$0.55	\$952	\$952
LNB + OFA + SNCR	42.7%	0.267	1044	\$1.16	\$1,106	\$1,299
ROFA + Rotamix	59.0%	0.19	1443	\$1.50	\$1,038	\$860
SCR + LNB + OFA	82.2%	0.083	2010	\$4.80	\$2,386	\$5,813
SCR + ROFA ³	82.2%	0.083	2010	\$5.47	\$2,721	\$7,001
Reid Gardner Unit 3						
LNB + OFA (enhanced)	6.5%	0.42	147	\$0.55	\$3,742	\$3,742
LNB + OFA + SNCR	29.9%	0.316	678	\$1.08	\$1,596	\$1,000
ROFA + Rotamix	38.0%	0.278	869	\$1.38	\$1,588	\$1,560
SCR + LNB + OFA	78.2%	0.098	1774	\$4.72	\$2,660	\$3,688
SCR + ROFA ²	78.2%	0.098	1774	\$5.40	\$3,045	\$4,444

¹ As summarized in Table 1, NDEP Reid Gardner BART Determination, October 22, 2009. Available as Docket Item No. EPA-R09-OAR-2011-0130-0005.

² Incremental cost effectiveness based on ROFA + Rotamix as previous control technology

The annualized costs listed in Table 1 are based on total capital installation costs and certain annual operating costs submitted to NDEP by Nevada Energy in its BART analysis. These costs were relied upon by NDEP and included in the SIP without modification. These cost calculations provided line item summaries of capital costs and annual operating costs, but did not provide further supporting information such as detailed equipment lists, vendor quotes, or the design basis for line item costs.

In its RH SIP, NDEP indicated that it based its NOx BART determination of ROFA with Rotamix rather than SCR primarily on the incremental costs of compliance. NDEP judged the costs of ROFA with Rotamix as cost effective based on an average cost effectiveness of approximately \$1100-1600/ton, as seen in Table 1. NDEP then eliminated more stringent control options, such as

the SCR-based options, based on high incremental cost effectiveness. Specifically, NDEP stated that "the \$/ton of NOx removed increased significantly . . . without correspondingly significant improvements in visibility."¹³ Per NDEP estimates, the incremental cost effectiveness of SCR with LNB and OFA is approximately \$3,600-6,100/ton. NDEP determined that this additional incremental cost per ton for SCR technologies did not appear cost effective compared to the incremental visibility improvement achieved by the SCR-based control options.

EPA's analysis: In reviewing the Nevada RH SIP and public comments, we identified several aspects of NDEP's approach to this factor with which we disagreed, and for which we have performed additional analysis. We received several public comments that NDEP's cost calculations were overestimated and based on methodology inconsistent with EPA's Control Cost Manual (CCM).¹⁴ We agree that NDEP included inappropriate costs and our analysis excludes those costs that are not allowed by the CCM. Therefore, we have revised these cost calculations and adjusted the value of specific variables to conform to values allowed by the CCM. Aside from these items, other commenters alleged that aspects of NDEP's cost estimates were unjustified or

¹³ Revised NDEP Reid Gardner BART Determination Review, page 6. Available as Docket Item No. EPA-R09-OAR-2011-0130-0005.

¹⁴ See comments from NPCA Consortium (EPA-R09-OAR-2011-0130-0062), National Park Service and U.S. Fish and Wildlife Service (EPA-R09-OAR-2011-0130-0054) and in expert report by Petra Pless/Bill Powers (attachment to EPA-R09-OAR-2011-0130-0062).

overestimated, such as a failure to account for multiple unit discount and overestimated reagent costs.¹⁵ We agree that the record does not support the positions that NDEP has taken on these cost items. However, we did not account for these additional discrepancies in our revised cost estimate since disallowing those costs not in the CCM resulted in our finding that SCR is cost effective. The disallowed costs result in a decrease of 25-33 percent in the average and incremental cost effectiveness of the control technology options. Detailed cost calculations, in which we revised the original cost calculations (as included in the RH SIP) and the updated cost calculations (as provided by NDEP on February 14, 2012) for each NOx control technology, are included in Appendix A of our TSD. Summarized in Table 2 below is a comparison of the updated NDEP cost calculations (as provided on February 14, 2012) and our revised cost calculations for the SCR with LNB and OFA control technology option.

Table 2. Cost Effectiveness Comparison - SCR with LNB and OFA

Unit No.	Average Cost Effectiveness (\$/ton)		Incremental Cost Effectiveness (\$/ton)	
	NDEP	EPA Revised	NDEP	EPA Revised
Unit 1	\$2,827	\$2,110	\$6,370	\$4,534
Unit 2	\$2,627	\$1,967	\$6,080	\$4,330
Unit 3	\$2,932	\$2,183	\$3,856	\$2,756

¹⁵ These items were primarily noted in the expert report by Petra Pless/Bill Powers (attachment to EPA-R09-OAR-2011-0130-0062).

Based on our revised cost estimates, we do not consider these average and incremental cost effectiveness values for SCR with LNB and OFA as cost prohibitive. Our analysis of this factor indicates that costs of compliance (average and incremental) are not sufficiently large to warrant eliminating SCR from consideration.

The incremental cost effectiveness values for Units 1 and 2 are around \$4,500/ton. Although EPA does not consider this incremental cost prohibitive, we note that the State has certain discretion in weighing this cost. Because RGGS is not a facility over 750 megawatts and therefore not subject to EPA's presumptive BART limits, the State may exercise its discretion more broadly in this particular determination.

2. Degree of visibility improvement

NDEP's Analysis: As part of its BART analysis, Nevada Energy performed visibility modeling in order to evaluate the visibility improvement attributable to each of the NOx control technologies that it considered. Results of the visibility modeling performed by Nevada Energy in its submittal to NDEP are summarized in Table 3 below.

Table 3. Summary of Nevada Energy Estimates of Visibility Benefit¹⁶

¹⁶ Visibility improvement listed here are for the Class I area with the highest impact, Grand Canyon National Park. They represent the change in the 98th percentile impacts from three modeled years. The "total" is the simple

Control Option	Visibility Improvement (from WRAP baseline) ¹⁷				Visibility Improvement (Incremental, from Control)
	RGGS1	RGGS2 (dv)	RGGS3	Total (dv)	Total (dv)
LNB + OFA (enhanced)	0.440	0.479	0.407	1.33	--
LNB + OFA + SNCR	0.521	0.560	0.485	1.57	0.24
ROFA + Rotamix	0.592	0.630	0.514	1.74	0.17
SCR + LNB + OFA	0.698	0.735	0.652	2.09	0.35
SCR + ROFA ¹⁸	0.698	0.735	0.652	2.09	0.35

Based upon these results, the installation of SCR with LNB and OFA would result in an incremental visibility improvement at Grand Canyon National Park of 0.35 deciviews (dv). This visibility improvement is based upon the NOx emission rates estimated by Nevada Energy in their BART analysis for each control technology option, and is relative to visibility impacts based on emissions used by the Western Regional Air Partnership (WRAP). In preparing the RH SIP, however, NDEP developed its own set of NOx emission estimates for the various control technology options. The differences between Nevada Energy's estimates and the emission estimates that form the basis of the Nevada RH SIP are summarized in Table 4 below.

total of the impacts from the three individual units, which Nevada Energy modeled separately..

¹⁷ From Table 5-4 of NVE BART Analysis Reports, Reid_Gardner_1_10-03-08.pdf, Reid_Gardner_2_10-03-08.pdf, Reid_Gardner_3_10-03-08.pdf. Available in Docket Item No. EPA-R09-OAR-2011-0130-0007. The improvements here are relative to the "WRAP baseline", impacts from emission levels used by the Western Regional Air Partnership and modeled by Nevada Energy. This is a different "baseline" than used for the cost estimates below.

¹⁸ Incremental visibility benefit of SCR + ROFA is based upon ROFA + Rotamix as previous control technology.

Table 4. Comparison of Nevada Energy and NDEP Control Technology Emission Estimates

Control Option	Nevada Energy		NDEP	
	Emission Factor ¹ (lb/MMBtu)	Control Efficiency ² (%)	Emission Factor ³ (lb/MMBtu)	Control Efficiency ³ (%)
Reid Gardner Unit 1				
Baseline (LNB + OFA)	0.38	--	0.462	--
LNB + OFA (enhanced)	0.30	21.3%	0.360	21.3%
LNB + OFA + SNCR	0.23	40.9%	0.270	40.9%
ROFA + Rotamix	0.16	57.7%	0.200	57.7%
SCR + LNB + OFA	0.07	81.6%	0.085	81.6%
SCR + ROFA	0.07	81.6%	0.085	81.6%
Reid Gardner Unit 2				
Baseline (LNB + OFA)	0.393	--	0.466	--
LNB + OFA (enhanced)	0.30	23.7%	0.355	23.7%
LNB + OFA + SNCR	0.23	42.7%	0.267	42.7%
ROFA + Rotamix	0.16	59.0%	0.190	59.0%
SCR + LNB + OFA	0.07	82.2%	0.083	82.2%
SCR + ROFA	0.07	82.2%	0.083	82.2%
Reid Gardner Unit 3				
Baseline (LNB + OFA)	0.32	--	0.451	--
LNB + OFA (enhanced)	0.30	6.5%	0.420	6.5%
LNB + OFA + SNCR	0.23	29.9%	0.316	29.9%
ROFA + Rotamix	0.20	38.0%	0.278	38.0%
SCR + LNB + OFA	0.07	78.2%	0.098	78.2%
SCR + ROFA	0.07	78.2%	0.098	78.2%

¹ From each respective unit's NVE BART Analysis, Table 3-1. Available in Docket Item No. EPA-R09-OAR-2011-0130-0007

² From each respective unit's NVE BART Analysis, Table 3-2. Available in Docket Item No. EPA-R09-OAR-2011-0130-0007

³ As summarized in Table 1, NDEP Reid Gardner BART Determination, October 22, 2009. Available as Docket Item No. EPA-R09-OAR-2011-0130-0005. Baseline emission factor is not explicitly calculated by NDEP. The factor listed in this table represents the listed annual emissions divided by "Base Heat Input".

As seen in these tables, NDEP's estimates of controlled emission rates differ from Nevada Energy's estimates. These differences are a result of NDEP's use of a different emission baseline in its calculations than Nevada Energy, which is

discussed below in our discussion of existing pollution control technology. Since NDEP elected to calculate controlled emission rates by retaining the respective percent reduction values for each control technology, rather than each control technology's emission rate (lb/MMBtu), the use of a higher baseline emission rate results in higher emission estimates for each control technology option. As a result, NDEP's estimated performance for each control technology is less stringent than Nevada Energy's estimates. NDEP, however, did not perform additional modeling to determine the visibility improvement attributable to its emission estimates, and continued to rely on the visibility modeling performed by Nevada Energy.

As noted in the discussion of cost of compliance, part of NDEP's basis for rejecting control technology options more stringent than ROFA with Rotamix as BART was that the incremental costs of more stringent control options were not justified relative to their corresponding increases in visibility improvement. However, without updated visibility modeling that indicates the visibility improvement attributable to NDEP's emission estimates, we do not consider NDEP to have properly considered the appropriate magnitude of incremental visibility improvement in reaching its determination. As discussed below, we have performed our own visibility modeling to determine these visibility impacts.

EPA's Analysis: In performing our own visibility modeling, the primary goal of our approach was to determine the visibility improvement associated with the NOx emission estimates relied upon in the RH SIP. In developing a modeling strategy, we decided that an approach that consisted of simply using Nevada Energy's modeling with model emission rates updated to reflect NDEP's estimates was not appropriate. As a result of changes to CALPUFF regulatory guidance that have occurred in the intervening time since Nevada Energy performed its visibility modeling, we elected to perform our visibility modeling in a manner that more closely adheres with current EPA regulatory guidance on CALPUFF modeling. Key elements of our modeling approach that differ from Nevada Energy's modeling include:

- CALPUFF system version: we performed our visibility modeling using version 5.8 of the CALPUFF model, and version 5.8 of the CALMET meteorological preprocessor, which are the current regulatory-approved versions. Nevada Energy's modeling used CALPUFF version 6.112, and CALMET version 6.211.

- Meteorological inputs: we used the meteorological inputs developed by the Western Regional Air Partnership, augmented with upper air data. Nevada Energy's modeling used some different inputs, and did not incorporate upper air data.

- SCR catalyst conversion efficiency: we performed our visibility modeling using an SCR catalyst SO₂ to SO₃ conversion

efficiency of 0.5 percent for purposes of calculating sulfuric acid emissions. Nevada Energy's modeling relied upon 1 percent conversion efficiency.

- Calculation of visibility impact: we calculated our visibility impacts using the revised IMPROVE equation (Method 8, mode 5)¹⁹ in addition to the original IMPROVE equation (Method 6). Nevada Energy's modeling was performed before the availability of modeling guidance regarding the use of the revised IMPROVE equation and its incorporation into CALPUFF as Method 8.

- Control technology performance: we performed our visibility modeling using the NOx baseline emission rate and NOx control technology emission rates listed under the "NDEP" column in Table 4, which had not previously been modeled.

- In addition, we modeled another SCR control technology case corresponding to a NOx emission rate of 0.06 lb/MMBtu. As indicated in Table 4, both Nevada Energy and NDEP used control efficiency values in the range of 78 to 82 percent to estimate SCR performance. Typical SCR catalyst vendor guarantees can

¹⁹ The IMPROVE equation translates modeled or monitored concentrations of pollutants like sulfate and nitrate into extinction, a measure of visibility. See: <http://vista.cira.colostate.edu/improve/> Extinction, in turn, is used to calculate deciviews, the visibility impact metric used in the BART Guidelines. The various visibility "methods" in CALPUFF differ in how they account for background concentrations and adjustments for relative humidity. Method 8, mode 5 is the currently-recommended method. "Federal Land Managers' Air Quality Related Values Workgroup (FLAG) Phase I Report" (December 2000), U.S. Forest Service, National Park Service, U.S. Fish And Wildlife Service. See: <http://www.nature.nps.gov/air/Pubs/pdf/flag/FlagFinal.pdf>

indicate 90 percent NOx reduction.²⁰ We have elected to model 0.06 lb/MMBtu based on a selection of a mid-range control efficiency of 85 percent reduction from Nevada Energy's NOx emission baseline.

A more detailed discussion of our visibility modeling, including full visibility results for all Class I areas located within 300 km of RGGs, is in our TSD and associated emission calculation spreadsheet. A summary of visibility results is presented in Table 5 below.

Table 5. Summary of Visibility Impacts

Control Option	Visibility Impact ¹ (all three units) (dv)	Visibility Improvement	
		From Baseline (dv)	Incremental, From Previous Option (dv)
Baseline (LNB w/ OFA)	0.59	--	--
LNB w/ OFA (enhanced)	0.51	0.08	0.08
SNCR + LNB w/ OFA	0.37	0.21	0.13
ROFA w/ Rotamix	0.31	0.28	0.06
SCR w/ LNB + OFA	0.22	0.36	0.09
SCR w/ LNB + OFA ² (0.06 lb/MMBtu, each unit)	0.20	0.38	0.10

¹ Visibility impact summarized here represents the three-year 98th percentile impact at the Class I area with the highest impact, Grand Canyon National Park. All three units were modeled together. The CALPUFF model output was post-processed using CALPOST visibility Method 8, the revised IMPROVE equation, and using natural background concentrations for the best 20% of days. For full visibility results, including impacts at other Class I areas within 300 km and using other visibility methods, please see the TSD in today's docket.

² Incremental visibility improvement compared to ROFA with Rotamix.

As seen in these results, the total incremental visibility improvement resulting from the installation of SCR with LNB and

²⁰ We received public comments to this effect that included multiple vendor quotes. Available as attachments to Docket Items EPA-R09-OAR-2011-0130-0062 and -0063.

OFA compared to ROFA with Rotamix is 0.09 dv. This occurred at Grand Canyon National Park, the Class I area with the highest impact. In addition, we note that even our additional scenario that models the SCR control option at a 0.06 lb/MMBtu level of performance results in an incremental visibility improvement of only 0.10 dv relative to ROFA with Rotamix. Based on this small quantity of incremental visibility improvement, we agree with NDEP's conclusion that the control options more stringent than ROFA with Rotamix (or SNCR with LNB and OFA achieving the same emission limit) are not justified.

3. Existing pollution control technology

NDEP's analysis: Nevada Energy prepared and submitted a BART analysis to NDEP that accounted for the presence of low-NOx burners by using baseline NOx emission factors corresponding to 2004 actual emissions data.²¹ In preparing the RH SIP, NDEP developed a baseline NOx emission factor that was based upon past actual emission data over a 2001-07 time frame.²² This resulted in baseline NOx emission rates that are approximately 15 percent higher than those presented in Nevada Energy's BART analysis.

EPA's analysis: While NDEP's use of a set of baseline emissions different from those presented in Nevada Energy's BART

²¹ Baseline emission factors as listed in Table 2-2 of each unit's respective Nevada Energy BART Analysis. Available as attachments to EPA-R09-OAR-2011-0130-0007.

²² Per NDEP's Reid Gardner BART Determination Summary, NDEP used the average of the two consecutive years with highest annual emissions. Available as Docket Item No. EPA-R09-OAR-2011-0130-0005.

analysis does result in a higher baseline emission rate, NDEP's baseline emissions still reflect the use of low-NOx burners. We find that NDEP's approach to this factor is reasonable, and have not modified NDEP's NOx emission baseline in performing our own analysis. We do note that due to the emission calculation methodology NDEP used to calculate NOx control scenario emissions, increases to the NOx emission baseline will affect emission estimates for NOx control scenarios. These effects are discussed further in the analysis of degree of visibility impact.

4. Remaining useful life of the source

NDEP's analysis: In its BART analysis submittal to NDEP, Nevada Energy used a plant economic life of 20 years and performed control technology cost calculations based on control equipment lifetime equal to the plant economic life. In developing the RH SIP, NDEP relied upon these cost calculations without revision.

EPA's analysis: Use of a 20-year equipment life is consistent with assumptions made in EPA's Control Cost Manual for the equipment lifetime of certain NOx control technologies such as SCR and SNCR. Commenters alleged that without a firm shutdown date to ensure a plant lifetime of 20 years, a longer equipment life should be used in cost calculations. Use of a longer equipment life would result in lower annualized costs,

thereby making control technologies more cost effective. As discussed further in the analysis of costs of compliance, we already consider certain control technology options more stringent than ROFA with Rotamix, such as SCR with LNB and OFA, to be cost effective. As a result, we decline to pursue an analysis examining whether use of a 20-year plant economic life is appropriate.

5. Energy and non-air quality impacts

NDEP's Analysis: In its BART analysis submitted to NDEP, Nevada Energy identified certain energy impacts such as increased energy usage associated with ROFA as a result of induced draft fan installations. For SCR installations, increased energy usage is expected in order for existing fan systems to compensate for the additional pressure drop created by the SCR catalyst bed. Nevada Energy quantified these energy impacts as annual operating cost line items in cost calculations.

Non-air quality impacts identified by Nevada Energy in its BART analysis include the potential for ammonia slip from SCR or SNCR to impact the salability and disposal of fly ash, as well as to create a visible stack plume. The potential for transportation and storage of ammonia to result in an accidental release was also identified as a potential non-air quality impact. Nevada Energy cited these as negative impacts in its

consideration of SCR and SNCR control options. In preparing the RH SIP, NDEP did not further expand on these impacts in determining ROFA with Rotamix as BART for NOx.

EPA's Analysis: Although we consider the energy impacts accounted for by Nevada Energy to be reasonable, we note that supporting calculations were not provided for the line item cost associated with these impacts in control cost calculations. At this time, we decline to provide our own estimate of these impacts. Regarding non-air quality impacts, while we acknowledge that the items described by Nevada Energy are indeed potential concerns for the control technologies considered, we note that neither Nevada Energy's analysis nor the RH SIP provide further information discussing the extent to which these are site-specific concerns for RGGS Units 1 through 3. As a result, we consider these non-air quality impacts as not sufficiently significant at RGGS to warrant eliminating any of the control technology options.

VI. Federal Implementation Plan to Address NOx BART for Reid Gardner

Although our analysis supports NDEP's decision to not require control technology options more stringent than ROFA with Rotamix (or SNCR with LNB and OFA achieving the same emissions limit) as BART, completion of the BART process requires establishing enforceable emission limits that reflect the BART

control technology requirements.²³ As described in the sections below, we find certain elements of the emission limits established for RGGS in the RH SIP as either unsupported by the record or inconsistent with BART Guidelines. NDEP notified us in a letter dated March 22, 2012 that it intends to submit a RH SIP revision that will address these elements, which include establishing a NOx limit of 0.20 lb/MMBtu for Unit 3, and establishing NOx limits for each unit on a 30-day rolling average (averaged across all three units), rather than a 12-month rolling average. In addition, NDEP has indicated that the RH SIP revision it intends to submit will revise the selected control technology from ROFA with Rotamix to SNCR with LNB and OFA.

In order to meet the terms of our consent decree, it is necessary for EPA to propose action on Nevada's RH SIP at this time. As a result, we are proposing the promulgation of a FIP that will address the elements described below. We expect these elements to match the content of the revised RH SIP that Nevada has indicated it intends to submit.

Based upon the March 22, 2012 letter sent by NDEP indicating its intent to submit a revised RH SIP, we do not expect to receive the revised RH SIP prior to our consent decree deadline for final action on this proposal. Although we will

²³ 70 FR 39172

not receive the revised RH SIP prior to our final action, we do intend to act expeditiously on the revised RH SIP once it is submitted to EPA.

A. Unit 1 through 3 Averaging Period

We are proposing to promulgate a FIP to establish a NO_x emission limit of 0.20 lb/MMBtu for Unit 3. In its RH SIP, NDEP proposed a NO_x emission limit of 0.28 lb/MMBtu for Unit 3. This limit for Unit 3 (0.28 lb/MMBtu) was higher than the emission limit NDEP proposed for Units 1 or 2 (0.20 lb/MMBtu each). The higher emission limit appears to be partially attributable to the fact that the application of control technology to Unit 3 was projected to result in less stringent levels of performance relative to Units 1 and 2. As shown in Table 4 of this notice, Nevada Energy's emission estimates indicate that application of ROFA with Rotamix achieves nearly 60 percent reduction from baseline on Units 1 and 2, but only a 38 percent reduction from baseline on Unit 3. These percent reduction values were used by NDEP in developing its own estimate of NO_x emissions, which form the basis for the proposed NO_x limits.

Nevada Energy's BART analysis for Unit 3 did not provide a unit-specific explanation for this difference in control effectiveness. In responding to comments on this issue, NDEP indicated that it deferred to Nevada Energy's operational

experience in developing control efficiency data, and had no reason to question Nevada Energy's estimates.²⁴ The case-by-case nature of the BART determination process does provide for the consideration of site-specific and unit-specific characteristics in the BART analysis.²⁵ While there may be unique characteristics associated with Unit 3 that justify the lower percent reduction values used by Nevada Energy and NDEP, we do not find the record on this issue to be sufficiently detailed to support this determination. In the absence of what we consider sufficient justification by Nevada Energy and NDEP, we have evaluated Unit 3 control option emissions predicated upon similar levels of performance relative to Units 1 and 2. Based upon the Unit 3 baseline emissions relied upon by NDEP (described in the 'NDEP' column in Table 4), if a percent reduction similar to Units 1 and 2 were applied to Unit 3 baseline emissions, it can be expected to attain a NOx emission rate of 0.20 lb/MMBtu using the ROFA with Rotamix control option.

B. Unit 3 Emission Limit

We are proposing to promulgate a FIP to establish a 30-day rolling average, averaged across all three units, as the basis for the NOx emission limits for RGGS Units 1 through 3. In its

²⁴ Page D-37, Appendix D and C-9, Appendix C, Nevada RH SIP. Available as attachments to EPA-R09-OAR-2011-0130-0003.

²⁵ For example, when determining what control options are considered technically feasible at a specific unit, 70 FR 39165.

RH SIP, NDEP proposed NOx limits for Units 1 through 3 based upon a 12-month rolling average, which is a longer averaging period than the 30-day rolling average indicated by the BART Guidelines. Longer averaging periods allow operators the flexibility to "smooth out" short-term emission spikes by averaging those values with periods of lower emission rates. In responding to comments on this issue in its RH SIP, NDEP indicated that it specified the longer averaging period because Nevada Energy expected a high degree of operational variability with the ROFA with Rotamix control option based upon previous operational experience with ROFA.²⁶ Although operational flexibility can be a legitimate consideration when establishing an enforceable limit, we consider use of a rolling 12-month averaging period instead of a rolling 30-day average to be inconsistent with BART Guidelines.²⁷ We believe the fluctuations of the NOx emissions from each of the units is better dealt with by averaging the emissions from the three units to determine compliance over the 30-day rolling average.

C. Control Technology Basis

In its RH SIP, NDEP proposed emission limits for Units 1 through 3 based upon a control technology determination of ROFA with Rotamix. In its March 22, 2012 letter, NDEP indicated that

²⁶ Page D-60, Appendix D, Nevada RH SIP. Available as attachments to EPA-R09-OAR-2011-0130-0003.

²⁷ 70 FR 39172

it intends to submit an RH SIP revision that will revise the control technology determination to SNCR with LNB and OFA. In addition, the corresponding BART emission limits for NOx that NDEP has indicated it will establish for Units 1 through 3 are of equal or greater stringency than those included in the current RH SIP.

In its RH SIP, NDEP estimated that SNCR with LNB and OFA would be capable of achieving a NOx emission rate in the range of 0.27 to 0.31 lb/MMBtu (as summarized in Table 1 of this notice). These emission rates indicate that the SNCR with LNB and OFA control option is less stringent than ROFA with Rotamix, which NDEP estimated would be capable of achieving a NOx emission rate in the range of 0.20 to 0.28 lb/MMBtu. As noted in the BART Guidelines, BART "means an emission limitation based on the degree of reduction achievable through the application of the best system of continuous emission reduction."²⁸ Although NDEP may propose a less stringent control technology determination in a future RH SIP revision, we would not consider the final BART determination to be less stringent if the selected control option is capable of meeting the NOx emission limit of 0.20 lb/MMBtu (30-day rolling average, averaged across all three units) established in our FIP.

²⁸ 70 FR 39163

VI. Federal Implementation Plan to Address NOx BART for Reid Gardner

With the exception of the NOx BART emission limit for Unit 3 and the NOx averaging time for all three units, EPA is proposing to find the Nevada RH BART determination for NOx fulfills all the relevant requirements of CAA Section 169A and the Regional Haze Rule. Therefore, we are proposing to approve NDEP's conclusion that SCR is not required as BART for NOx. NDEP weighed the incremental cost of requiring SCR against the relatively small visibility improvement that would be achieved from installing and operating SCR. NDEP's incremental cost included costs that inappropriately increased the cost estimate. However, NDEP is allowed to weigh the incremental cost against the incremental visibility improvement. Our independent modeling found that incremental visibility improvement at adjacent Class I areas would be significantly lower than the improvement modeled by NDEP. This information supports our determination that NDEP is within the discretion allowed by the BART Guidelines to establish the NOx emissions limit that can be achieved with ROFA and Rotamix (or SNCR with LNB and OFA achieving the same emissions limit) as BART rather than requiring an emission limit consistent with SCR technology.

NDEP, however, failed to support applying a higher emission limit for Unit 3 and failed to provide a sufficient basis for

approving the emissions limit on a 12-month rolling average. Therefore, EPA is disapproving the RGGGS NOx BART determination for Unit 3 and promulgating a FIP setting the same emission limit for Unit 3 that NDEP set for Units 1 and 2. EPA is also promulgating a FIP requiring Units 1 through 3 to meet the NOx emissions limit of 0.20 lbs/mmBtu on a rolling 30-day average (across all three units).

VII. EPA's Proposed Action

A. Executive Order 12866: Regulatory Planning and Review

This proposed action is not a ``significant regulatory action'' under the terms of Executive Order (EO) 12866 (58 FR 51735, October 4, 1993), and is therefore not subject to review under the Executive Order. The proposed FIP applies to only one facility and is therefore not a rule of general applicability.

B. Paperwork Reduction Act

This proposed action does not impose an information collection burden under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. Under the Paperwork Reduction Act, a ``collection of information'' is defined as a requirement for ``answers to * * * identical reporting or recordkeeping requirements imposed on ten or more persons * * *.''' 44 U.S.C. 3502(3)(A). Because the proposed FIP applies to just one facility, the Paperwork Reduction Act does not apply. See 5 CFR 1320(c).

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid Office of Management and Budget (OMB) control number. The OMB control numbers for our regulations in 40 CFR are listed in 40 CFR part 9.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small

entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of today's proposed rule on small entities, small entity is defined as: (1) A small business as defined by the Small Business Administration's (SBA) regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of this proposed action on small entities, I certify that this proposed action will not have a significant economic impact on a substantial number of small entities. The Regional Haze FIP for the single facility being proposed today does not impose any new requirements on small entities. The proposed partial approval of the SIP, if finalized, merely approves state law as meeting Federal requirements and imposes no additional requirements beyond those imposed by state law. See *Mid-Tex Electric Cooperative, Inc. v. FERC*, 773 F.2d 327 (D.C. Cir. 1985)

D. Unfunded Mandates Reform Act (UMRA)

Under sections 202 of the Unfunded Mandates Reform Act of 1995 (''Unfunded Mandates Act''), signed into law on March 22,

1995, EPA must prepare a budgetary impact statement to accompany any proposed or final rule that includes a Federal mandate that may result in estimated costs to State, local, or tribal governments in the aggregate; or to the private sector, of \$100 million or more (adjusted to inflation) in any 1 year. Under section 205, EPA must select the most cost-effective and least burdensome alternative that achieves the objectives of the rule and is consistent with statutory requirements. Section 203 requires EPA to establish a plan for informing and advising any small governments that may be significantly or uniquely impacted by the rule.

Under Title II of UMRA, EPA has determined that this proposed rule does not contain a Federal mandate that may result in expenditures that exceed the inflation-adjusted UMRA threshold of \$100 million by State, local, or Tribal governments or the private sector in any 1 year. In addition, this proposed rule does not contain a significant Federal intergovernmental mandate as described by section 203 of UMRA nor does it contain any regulatory requirements that might significantly or uniquely affect small governments.

E. Executive Order 13132: Federalism

Federalism (64 FR 43255, August 10, 1999) revokes and replaces Executive Orders 12612 (Federalism) and 12875 (Enhancing the Intergovernmental Partnership). Executive Order

13132 requires EPA to develop an accountable process to ensure ``meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government." Under Executive Order 13132, EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or EPA consults with State and local officials early in the process of developing the proposed regulation. EPA also may not issue a regulation that has federalism implications and that preempts State law unless the Agency consults with State and local officials early in the process of developing the proposed regulation.

This rule will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132, because it merely addresses elements of

the State's Regional Haze SIP that are inconsistent with the Regional Haze Rule. In addition, the State has indicated that it intends to submit a SIP revision, the contents of which are intended to match the content of the FIP proposed in this rule. Thus, Executive Order 13132 does not apply to this action. In the spirit of Executive Order 13132, and consistent with EPA policy to promote communications between EPA and State and local governments, EPA specifically solicits comment on this proposed rule from State and local officials.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

Executive Order 13175, entitled Consultation and Coordination with Indian Tribal Governments (65 FR 67249, November 9, 2000), requires EPA to develop an accountable process to ensure "meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications." We note that the SIP is not approved to apply in Tribal lands located in the State, will not impose substantial direct costs on tribal governments or preempt tribal law, and does not affect the distribution of power and responsibilities between the Federal Government and any Indian tribes. As a result, while this rule applies to an emissions source that is adjacent to the Moapa Reservation, it does not have direct tribal implications as specified by Executive Order

13175 (65 FR 67249, November 9, 2000). However, we acknowledge that concerns about the environmental impacts of this facility have been raised by the Moapa Tribe. We have formally consulted with the Moapa Tribe regarding those concerns, and have visited the reservation and the facility. We will continue to work with the Moapa Tribe as we proceed with our action.

G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks (62 FR 19885, April 23, 1997), applies to any rule that: (1) is determined to be economically significant as defined under Executive Order 12866; and (2) concerns an environmental health or safety risk that we have reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

This rule is not subject to Executive Order 13045 because it does not involve decisions intended to mitigate environmental health or safety risks. However, to the extent this proposed rule will limit emissions of NO_x, the rule will have a

beneficial effect on children's health by reducing air pollution.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211 (66 FR 28355 (May 22, 2001)), because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act

Section 12 of the National Technology Transfer and Advancement Act (NTTAA) of 1995 requires Federal agencies to evaluate existing technical standards when developing a new regulation. To comply with NTTAA, EPA must consider and use "voluntary consensus standards" (VCS) if available and applicable when developing programs and policies unless doing so would be inconsistent with applicable law or otherwise impractical. The EPA believes that VCS are inapplicable to this action. Today's action does not require the public to perform activities conducive to the use of VCS.

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

VIII. Statutory and Executive Order Reviews

Executive Order 12898 (59 FR 7629, February 16, 1994), establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States. We have determined that this proposed rule, if finalized, will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it increases the level of environmental protection for all affected populations without having any disproportionately high and adverse human health or environmental effects on any population, including any minority or low-income population. This proposed rule limits emissions of NO_x from a single facility in Nevada. The partial approval of the SIP, if finalized, merely approves state law as meeting Federal requirements and imposes no additional requirements beyond those imposed by state law.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control,
Intergovernmental relations, Nitrogen oxides, Reporting and
recordkeeping requirements.

AUTHORITY: 42 U.S.C. 7401 *et seq.*

Dated: April 2, 2012

Signed: Jared Blumenfeld
Regional Administrator,
Region 9

For the reasons stated in the preamble, Part 52, chapter I, title 40 of the Code of Federal Regulations is proposed to be amended as follows:

PART 52-- [AMENDED]

1. The authority citation for Part 52 continues to read as follows:

AUTHORITY: 42 U.S.C. 7401 et seq.

2. Part 52 is amended by adding §52.1488(e) to 52.1488 Visibility Protection, to read as follows:

§ 52.1488 Visibility protection.

* * * * *

(e) This paragraph (e) applies to each owner and operator of the coal-fired electricity generating units (EGUs) designated as Units 1, 2, and 3 at the Reid Gardner Generating Station in Clark County, Nevada.

(1) *Definitions.* Terms not defined below shall have the meaning given to them in the Clean Air Act or EPA's regulations implementing the Clean Air Act. For purposes of this section: *Ammonia injection* shall include any of the following: anhydrous ammonia, aqueous ammonia or urea injection.

Combustion controls shall mean new low NO_x burners, new overfire air, and/or rotating overfire air.

Continuous emission monitoring system or *CEMS* means the equipment required by 40 CFR Part 75 to determine compliance with this section.

NO_x means nitrogen oxides expressed as nitrogen dioxide (NO₂).

Owner/operator means any person who owns or who operates, controls, or supervises an EGU identified in paragraph (e) of this section.

Unit means any of the EGUs identified in paragraph (e) of this section.

Unit-wide means all of the EGUs identified in paragraph (e) of this section.

(2) *Emission limitations* - The NO_x limit, expressed as nitrogen dioxide, for Units 1, 2, and 3 shall be 0.20 lb/MMBtu based on a unit-wide heat input weighted average determined over a rolling 30-calendar day period. NO₂ emissions for each calendar day shall be determined by summing the hourly emissions measured in pounds of NO₂ for all operating units. Heat input for each calendar day shall be determined by adding together all hourly heat inputs, in millions of BTU, for all operating units. Each day the thirty-day rolling average shall be determined by adding together that day and the preceding 29 days' pounds of NO₂ and

dividing that total pounds of NO₂ by the sum of the heat input during the same 30-day period. The results shall be the 30-calendar day rolling pound per million BTU emissions of NO₂.

(3) *Compliance date.* The owners and operators subject to this section shall comply with the emissions limitations and other requirements of this section within 5 years from promulgation of this paragraph and thereafter.

(4) *Testing and Monitoring.* (i) The owner or operator shall use 40 CFR Part 75 monitors and meet the requirements found in 40 CFR Part 75. In addition to these requirements, relative accuracy test audits shall be performed for both the NO₂ pounds per hour measurement and the hourly heat input measurement, and shall have relative accuracies of less than 20%. This testing shall be evaluated each time the 40 CFR Part 75 monitors undergo relative accuracy testing. Compliance with the emission limit for NO₂ shall be determined by using data that is quality assured and considered valid under 40 CFR Part 75, and which meets the relative accuracy of this paragraph.

(ii) If a valid NO_x pounds per hour or heat input is not available for any hour for a unit, that heat input and NO_x pounds per hour shall not be used in the calculation of the unit-wide rolling 30 calendar day average. Each Unit shall

obtain at least 90% valid hours of data over each calendar quarter. 40 CFR Part 60 Appendix A Reference Methods may be used to supplement the Part 75 monitoring.

(iii) Upon the effective date of the unit-wide NO_x limit, the owner or operator shall have installed CEMS software that meets with the requirements of this section for measuring NO₂ pounds per hour and calculating the unit-wide 30 calendar day rolling average as required in paragraph (e)(2) of this section.

(iv) Upon the completion of installation of ammonia injection on any of the three units, the owner or operator shall install, and thereafter maintain and operate, instrumentation to continuously monitor and record levels of ammonia consumption for that unit.

(5) *Notifications.* (i) The owner or operator shall notify EPA within two weeks after completion of installation of combustion controls or ammonia injection on any of the units subject to this section.

(ii) The owner or operator shall also notify EPA of initial start-up of any equipment for which notification was given in paragraph (e)(5)(i).

(6) *Equipment Operations.* After completion of installation of ammonia injection on any of the three units, the owner or operator shall inject sufficient ammonia to minimize the NO_x

emissions from that unit while preventing excessive ammonia emissions.

(7) *Recordkeeping.* The owner or operator shall maintain the following records for at least five years:

(i) for each unit, CEMS data measuring NO_x in lb/hr, heat input rate per hour, the daily calculation of the unit-wide 30 calendar day rolling lb NO₂/MMBtu emission rate as required in paragraph (e)(2) of this section.

(ii) Records of the relative accuracy test for NO_x lb/hr measurement and hourly heat input

(iii) Records of ammonia consumption for each unit, as recorded by the instrumentation required in paragraph (e)(4)(iv) of this section.

(8) *Reporting.* Reports and notifications shall be submitted to the Director of Enforcement Division, U.S. EPA Region IX, at 75 Hawthorne Street, San Francisco, CA 94105. Within 30 days of the end of each calendar quarter after the effective date of this section, the owner or operator shall submit a report that lists the unit-wide 30 calendar day rolling lb NO₂/MMBtu emission rate for each day. Included in this report shall be the results of any relative accuracy test audit performed during the calendar quarter.

(9) *Enforcement.* Notwithstanding any other provision in this implementation plan, any credible evidence or information relevant as to whether the unit would have been in compliance with applicable requirements if the appropriate performance or compliance test had been performed, can be used to establish whether or not the owner or operator has violated or is in violation of any standard or applicable emission limit in the plan.

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